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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/577,506	05/24/2000	Muhammed A. Qureshi	Hernandez-Valencia 11-2-5	6396

7590 10/06/2003

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EXAMINER

RYMAN, DANIEL J

ART UNIT	PAPER NUMBER
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2665

3

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/577,506

Applicant(s)

QURESHI ET AL.

Examiner

Daniel J. Ryman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☒ Claim(s) 5 and 32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: ref. 200 (see page 11); ref. 300 (see page 25); ref. 400 (see pages 30 and 31); ref. 500 (see pages 33 and 34); ref. 600 (see page 40); ref. 700 (see pages 45 and 46); ref. 800 and 825 (see page 48 and 50); and ref. 900 (see page 54). A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to because ref. 311 located after ref. 333 in Fig. 3 should be relabeled as ref. 335 in order to match page 25, lines 1 and 11 in the specification; in Fig. 6C ref. 641 "If either" should be "Is either"; and ref. 924 located in Fig. 9B should be relabeled as ref. 935 in order to match page 56, line 26 in the specification. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: on page 27, line 12 “step 341” should be “step 331” since step 335 cannot flow back to step 341 since step 341 is after step 335. On page 28, lines 7 and 10 “Mol” should be “MOL”. On page 59, line 3 “From step 951” should be “From step 952” in order to match Fig. 9.

Appropriate correction is required.

Claim Objections

5. Claim 5 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 1, which claim 5 indirectly depends upon, already contains limitation of an additional step 3 as disclosed in claim 5.

6. Claim 32 objected to because of the following informalities: it appears from the context that claim 32 should depend upon claim 31 and not claim 21. Appropriate correction is required. For the purposes of prior art rejections, Examiner will interpret claim 32 to depend upon claim 31.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 3-5, 12-16, 19-28, 32, and 34-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject

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matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 3, 19, and 34 do not disclose for what the variables in the equation stand. In order to overcome this rejection, claims 3, 19, and 34 should include a description of all the variables in the equation.

9. Claims 3-5, 12-16, 19-28, 32, and 34-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 3, 19, and 34 disclose an equation which includes the term $M_i!$. The equation in the specification, seen on page 20, line 12-page 21, line 13, has the term as M_i . The term in the equation in Fig. 3A is $M_i!$. Because of these discrepancies, the aforementioned claims are deemed unenabling. For the purposes of prior art rejections, Examiner will interpret the term to be $M_i!$ which appears in Fig. 3A.

10. Claim 21 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 21 discloses a second set of virtual pipelines; however, a first set was never claimed. In claim 17, which claim 21 indirectly depends, a set of pipelines was disclosed, but it is not clear if this set is the first set or an additional set of pipelines. Examiner will interpret claim 17 to read that the set of pipelines is the first set of pipelines.

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11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 9-11, 14, 20, 25, and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

13. Claims 9-11 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: steps 7 and 8. For the purposes of prior art rejections, Examiner will interpret step 9 in claim 9 to be step 7, etc.

14. Claims 14 and 25 contain the limitation that the network is a telephone network. Claims 14 and 25 indirectly depend upon claims 12 and 23 which contains the limitation that the network is an ATM network. Since ATM networks are separate and distinct from telephone networks, claim 14 is indefinite. Examiner will not interpret claim 14 for the purposes of prior art rejections since Examiner is not certain as to what is being claimed.

15. Claims 20 and 34 recites the limitation "equation 2a" in lines 1-2 and "equation 2b" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim. Claims 20 and 34 depend on claims 19 and 34 which do not have the equations labeled. For the purpose of prior art rejections, Examiner will interpret claims 20 and 34 to read in a similar fashion to claim 4.

16. Claims 21, 22, and 32 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: steps 3-8. For the purposes of prior art rejections, Examiner will interpret step 9 in claim 21 to be step 3, etc.

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 1, 17, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al (USPN 6,266,322) in view of Selinger (USPN 6,345,038).

19. Regarding claims 1, 17, and 29, Berger discloses a method of and apparatus for reconfiguring pipeline sizes in order to relieve congestion in a packet-based network (col. 1, lines 13-21), said network comprising a plurality of gateway nodes (ref. 11) having data to be transferred therebetween (Fig. 1 and col. 1, lines 31-52), and utilizing a concept of virtual pipelines (links) between nodes (gateway) of said network (col. 1, lines 39-52 and col. 5, line 57-col. 6, line 11), said pipelines comprising one or more channels (abstract; col. 3, lines 6-19; and col. 5, line 57-col. 6, line 11), said method comprising the steps of and apparatus comprising means for: (1) identifying congested (bottlenecked) links (col. 4, lines 63-67; col. 6, lines 13-31; col. 7, lines 8-11; col. 7, lines 15-21; col. 7, line 22-col. 8, line 63); (2) for virtual pipelines that are congested, determining pipeline size that would cause said traffic through said pipeline to not be congested (col. 3, lines 6-33; col. 6, lines 13-31; and col. 7, lines 8-21); and (3) for each pipeline that can be increased in size, increasing its size to said size determined in step (2) (col. 4, lines 63-67; col. 6, lines 13-31; col. 7, line 8-col. 8, line 63). Berger does not disclose identifying a first set of virtual pipelines for which traffic exceeds a predetermined threshold Selinger discloses, in a system for improving access to congested networks, that congestion is

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defined as traffic on a link exceeding a defined limit of congestion (threshold) (col. 1, line 66-col. 2, line 9). Since congestion is defined as traffic exceeding a defined limit of congestion (threshold), it would have been obvious to one of ordinary skill in the art at the time of the invention to identify the congested links as being a first set of virtual pipelines for which traffic exceeds a predetermined threshold.

20. Claims 2, 18, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al (USPN 6,266,322) in view of Selinger (USPN 6,345,038) as applied to claim 1 above, and further in view of Jurkevich et al (USPN 5,164,938).

21. Regarding claims 2, 18, and 33, referring to claims 1, 17, and 29, Berger in view of Selinger discloses that the predetermined threshold is can be any defined limit of congestion (Selinger: col. 1, line 66-col. 2, line 2) and wherein step (2) comprises determining a minimum pipeline size that would reduce the defined limit of congestion for said pipeline below said predetermined threshold based on based on call arrival rate at said virtual pipeline and average holding time per call (Berger: col. 3, lines 6-33; col. 4, lines 63-67; col. 6, lines 13-31; col. 7, line 8-col. 8, line 63 and Selinger: col. 1, line 66-col. 2, line 9) where Selinger teaches that increased link bandwidth results in a greater acceptance rate of calls (Selinger: col. 1, line 66-col. 2, line 9). Berger in view of Selinger does not disclose that the defined limit of congestion is a call blocking ratio. Jurkevich teaches, in a system for relieving congestion on a network, using a call blocking ratio as a congestion threshold in order to control quality (col. 21, lines 36-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a call blocking ratio as a congestion threshold in order to control quality.

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22. Claims 3-5, 12, 13, 15, 16, 19-24, 26-28, and 34-36, are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al (USPN 6,266,322) in view of Selinger (USPN 6,345,038) in further view of Jurkevich et al (USPN 5,164,938) as applied to claims 2, 18, and 33 above, and further in view of Applicant's admitted prior art.

23. Regarding claims 3, 19, and 34, referring to claims 2, 18, and 33, Berger in view of Selinger in further view of Jurkevich discloses that the minimum pipeline size is expressed as a number of channels, M (Berger: N^*), in said pipeline (Berger: col. 3, line 66-col. 4, line 6). Berger in view of Selinger in further view of Jurkevich does not expressly disclose that step (2) comprises determining a number of channels M by the given equation; however, Berger in view of Selinger in further view of Jurkevich does disclose using an Erlang blocking model for determining dimensioning of links (Berger: col. 2, lines 20-44). Applicant admits that the given equation is a well-known Erlang blocking formula (page 20, line 6-page 22, line 17). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the given equation since it is a well-known Erlang blocking formula where Berger in view of Selinger in further view of Jurkevich disclose using an Erlang blocking model.

24. Regarding claims 4, 20, and 35, referring to claims 3, 19, and 34, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses that $p(t)=\lambda(t)/u(t)$ is used when call rate through said pipeline has been historically increasing and $p'(t)=\lambda(t)-p(t)/u(t)$ is used when call rate through said pipeline has been historically decreasing (Applicant's admitted prior art: page 20, line 6-page 22, line 17).

25. Regarding claim 5, referring to claim 3, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses the step of: (3) for each

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pipeline in said first set that can be increased in size, increasing its size to said size determined in step (2) (Berger: col. 4, lines 63-67; col. 6, lines 13-31; col. 7, line 8-col. 8, line 63).

26. Regarding claims 12 and 23, referring to claims 3 and 20, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses that the network is an asynchronous transfer mode network (Berger: col. 3, lines 15-19 and col. 4, lines 63-67).

27. Regarding claims 13 and 24, referring to claims 12 and 24, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses that the network is used to exchange voice data (Berger: col. 1, lines 24-28).

28. Regarding claims 15 and 26, referring to claims 3 and 20, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses that the network interconnects a plurality of other networks (Berger: Fig. 1 and col. 1, lines 31-52 and Selinger: Fig. 9, ref. 108).

29. Regarding claims 16 and 27, referring to claims 15 and 26, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses that the other networks comprises time division multiplexed networks (Berger: Fig. 1 and col. 1, lines 31-52; Selinger: Fig. 9, ref. 108; and Jurkevich: Fig. 8 and col. 1, line 25-col. 2, line 22).

30. Regarding claims 21 and 36, referring to claims 19 and 34, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses steps of: (3) identifying a second set of virtual pipelines for which traffic is less than said predetermined threshold (Berger: col. 7, lines 8-20); and (4) for each pipeline in said second set, determining a

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size of the smallest pipeline that can accommodate the traffic present in that pipeline (Berger: col. 7, lines 8-20).

31. Regarding claim 22, referring to claim 21, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art does not disclose the step of: (10) calculating a peak cell rate corresponding to said number of channels determined in step (2). Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses calculating the probability that a connection will exceed a given bit rate (Berger: col. 3, lines 29-33 and col. 8, lines 30-32) where the probability of exceeding the given rate is very small. It would have been obvious to one of ordinary skill in the art at the time of the invention that the given rate is similar to the peak cell rate since the peak cell rate is a given rate at which the probability of exceeding the given rate is very small.

32. Regarding claim 28, referring to claim 27, Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses that the other networks comprise public service telephone networks (Berger: Fig. 1 and col. 1, lines 31-52; Selinger: Fig. 9, ref. 108; and Jurkevich: Fig. 8 and col. 1, line 25-col. 2, line 22).

33. Claims 6, 7, 9-11, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al (USPN 6,266,322) in view of Selinger (USPN 6,345,038) as applied to claims 1 and 29 above, and further in view of Matthews et al (USPN 6,104,705).

34. Regarding claims 6 and 30, referring to claims 1 and 29, Berger in view of Selinger does not disclose the steps of: (4) for each pipeline that cannot be resized in accordance with step (3), determining if a path exists that can accommodate a pipeline of said size determined in step (2); and (5) for each pipeline for which a path exists that can accommodate a pipeline of said size

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determined in step (2), creating a pipeline having said size, and directing all new channels between the corresponding gateway nodes through said newly created pipeline. Matthews teaches, in a system for avoiding congestion on a link, for each link that is congested, determining if a path exists that can accommodate a link of equivalent size (col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4), where it is implicit that the preferred alternate links will have an equivalent bandwidth unless the link is congested, and for each congested link for which a path exists that can accommodate a pipeline of equivalent size creating a link having said size (col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4), and directing all new channels between the corresponding gateway nodes through said newly created link (col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4) in order to balance load across a network such that network efficiency is improved (col. 3, lines 22-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to distribute the load over other connections in the network when the resizing method fails in order to balance load across a network such that network efficiency is improved.

35. Regarding claims 7 and 31, referring to claims 6 and 30, Berger in view of Selinger in further view of Matthews suggests the steps of: (6) deleting each pipeline in said second set for which a new pipeline was created in step (5) when no channels are utilizing said pipeline (Matthews: col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4).

36. Regarding claim 9, referring to claim 7, Berger in view of Selinger in further view of Matthews discloses steps of: (7) identifying a second set of virtual pipelines for which traffic is less than said predetermined threshold (Berger: col. 7, lines 8-20); and (8) for each pipeline in

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said second set, determining a size of the smallest pipeline that can accommodate the traffic present in that pipeline while satisfying said predetermined threshold (Berger: col. 7, lines 8-20).

37. Regarding claim 10, referring to claim 9, Berger in view of Selinger in further view of Matthews discloses the steps of: (9) reducing the size of each of said pipelines in said second set that can be reduced in size to said size determined in step (8) (Berger: col. 7, lines 8-20); (12) for each pipeline that cannot be resized in accordance with step (10), determining if a path exists that can accommodate a pipeline of said size determined in step (8) (Matthews: col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4); and (11) for each pipeline for which a path exists that can accommodate a pipeline of said size determined in step (8), creating a pipeline having said size, and directing all new channels between the corresponding gateway nodes through said pipeline (Matthews: col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4).

38. Regarding claim 11, referring to claim 10, Berger in view of Selinger in further view of Matthews discloses the steps of: (12) deleting each pipeline in said second set for which a new pipeline was created in step (11) when no channels are utilizing said pipeline (Matthews: col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4).

39. Claims 8 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al (USPN 6,266,322) in view of Selinger (USPN 6,345,038) in further view of Matthews et al (USPN 6,104,705) as applied to claims 7 and 31 above, and further in view of Fedyk et al (USPN 5,848,055).

40. Regarding claims 8 and 32, referring to claims 7 and 31, Berger in view of Selinger in further view of Matthews possibly does not disclose the steps of: (7) for each pipeline in said

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first set that cannot be resized in step (3) and for which an alternate path is determined in step (4) not to exist, determining if a pipeline can be created that can accommodate a fraction of said channels in said pipeline by which said pipeline exceeds said threshold; (8) creating a new pipeline of a size corresponding to said fraction of channels determined in step (7) and directing said fraction of new channels from said pipeline to said new pipeline. Fedyk teaches, in a system for establishing an alternate path (additional pipeline), having the alternate path request a bandwidth that is above the bandwidth reserved by the active path in order to not over utilize trunks (col. 4, lines 7-21). It would have been obvious to one of ordinary skill in the art at the time of the invention to establish an additional pipeline (alternate path) with the additional pipeline accommodating a fraction of said channels in said pipeline by which said pipeline exceeds said threshold in order to not over utilize trunks.

41. Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al (USPN 6,266,322) in view of Selinger (USPN 6,345,038) in further view of Jurkevich et al (USPN 5,164,938) in further view of Applicant's admitted prior art as applied to claim 36 above, and further in view of Matthews et al (USPN 6,104,705).

42. Regarding claim 37, referring to claim 36, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses means for reducing the size of each of said pipelines in said second set that can be reduced in size to said smallest size (Berger: col. 7, lines 8-20). Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art does not disclose means for determining, for each pipeline that cannot be resized, if a path exists that can accommodate a pipeline of said smallest size; and means for creating, for each pipeline for which a path exists that can accommodate a pipeline of

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said smallest size, a virtual pipeline having said size, and for directing all new channels between the corresponding nodes (gateways) through said pipeline. Matthews teaches, in a system for avoiding congestion on a link, for each link that is congested, determining if a path exists that can accommodate a link of equivalent size (col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4), where it is implicit that the preferred alternate links will have an equivalent bandwidth unless the link is congested, and for each congested link for which a path exists that can accommodate a pipeline of equivalent size creating a link having said size (col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4), and directing all new channels between the corresponding gateway nodes through said newly created link (col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4) in order to balance load across a network such that network efficiency is improved (col. 3, lines 22-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to distribute the load over other connections in the network when the resizing method fails in order to balance load across a network such that network efficiency is improved.

43. Regarding claim 38, referring to claim 37, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art in further view of Matthews discloses means for deleting each pipeline in said second set for which a new pipeline was created when no channels are utilizing said pipeline (Matthews: col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4).

Conclusion

44. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ganson et al (USPN 5,579,301) see col. 1, line 5-col. 2, line 6 which pertains to

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changing the compression of signals in order to relieve congestion in a network. Berthaud et al (USPN 6,011,776) see col. 4, line 63-col. 5, line 38 which pertains to adapting the bandwidth of flows of traffic in order to avoid congestion. Lin (USPN 5,475,615) see col. 1, line 62-col. 3, line 10 which pertains to determining a number of active circuits in order to meet required blocking probability constraints.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The examiner can normally be reached on Mon.-Fri. 7:00-5:00 with every other Friday off.

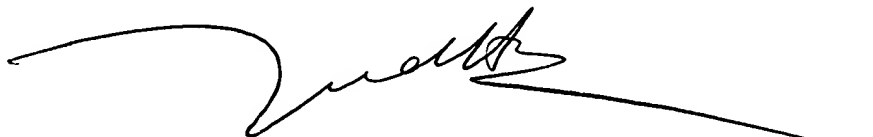
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703)308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Daniel J. Ryman
Examiner
Art Unit 2665

DJR

Daniel J. Ryman



HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600